Proton Driver Paraneters (Palmer MCTF 8/16/07)

- For $\Delta\nu = 0.1$ and 25 pi mm mrad
- requires 2 10^{12} muons per bunch
- Assume 7% muon survival and ISS capture
- Protons per bunch $8\ 10^{13}$ at 24 GeV
- Extracted bunches must have $\sigma_t \leq 3$ (nsec)

At other p energies:

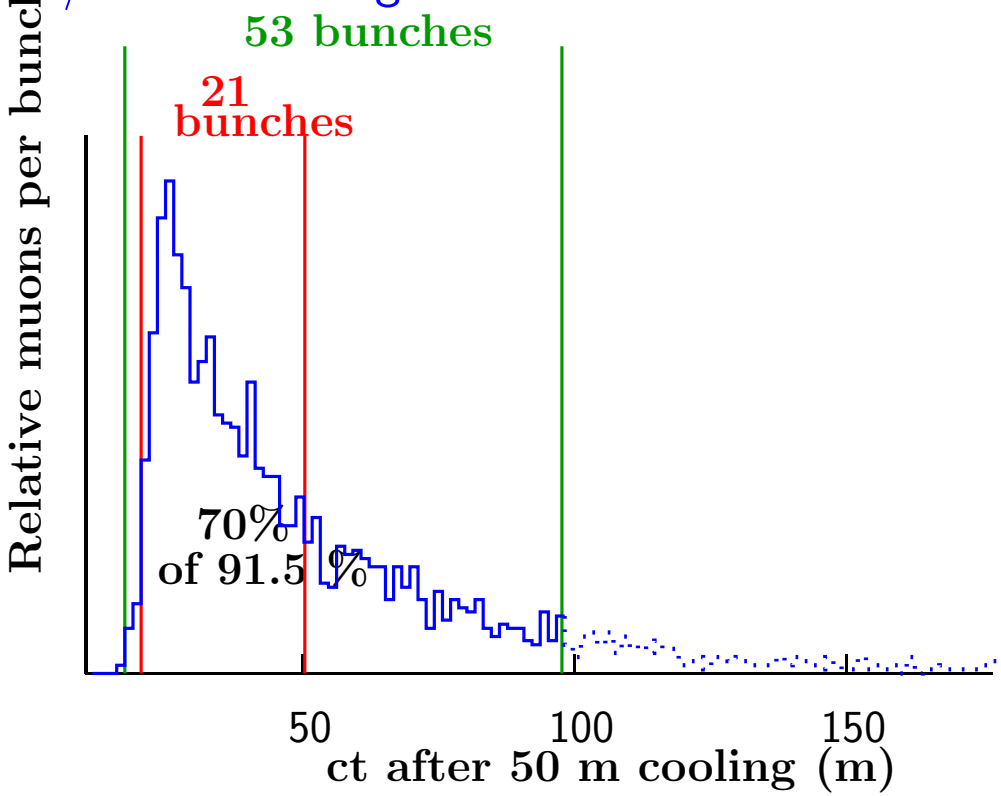
Proton Energy (GeV)		8	24	60
Protons accelerated	10^{14}	5	5	5
Protons/bunch	10^{13}	24	8	3.2

- Achieving the 3 nsec bunches at 8 GeV would appear very hard
- 60 GeV seems much more practical
- Higher cooling efficiency could ease these requirements
- Needs more study

What if we do not merge

Losses down a factor of about 3

0.7 for merge, 1/2 for recooling



Luminosity down only about 2.2

But:

- Tune shift (from all b unches) up by 3 (to 0.3)
- Neutrino Radiation (from all buches) up by 3